

## INITIAL REVIEW EXPOSURE REPORT

Chemical ID: Jeffamine DA on-site

Assessor:

### ENVIRONMENTAL RELEASES

Scenario#:1

Number of Release Sites: 1.

Release Activity: Unload raw material from drums

| Release Description: | WATER                | LANDFILL<br>Non-sludge/Sludge | STACK                 | FUGITIVE                  |
|----------------------|----------------------|-------------------------------|-----------------------|---------------------------|
| Total Releases:      | N/A<br>(kg/yr)       | N/A<br>(kg/yr)                | 0.00<br>(kg/yr)       | 1.82E-12<br>(kg/yr)       |
| Non-sludge/Sludge    |                      |                               |                       |                           |
| Release Days/yr:     | N/A                  | 0.00/0.00                     | 0.00                  | 50.00                     |
| Per Site Release:    | N/A<br>(kg/site/day) | N/A/0.00<br>(kg/site/day)     | 0.00<br>(kg/site/day) | 3.64E-14<br>(kg/site/day) |

Remarks:

# INITIAL EXPOSURE REVIEW REPORT

Chemical ID: Jeffamine DA on-site

## INHALATION EXPOSURE ESTIMATES (POST-TREATMENT)

SCENARIO #: 1 RELEASE ACTIVITY: Unload raw material from drums

RELEASE DESCRIPTION:

METHOD OF CALCULATION: Screen3

EXPOSED POPULATION: Adult

|  |                            |
|--|----------------------------|
| Number of Sites:                                 | 1.                         |
| Per Site Fugitive Release:                       | 3.64E-14 kg/site/day       |
| Fugitive Release Days per Year:                  | 50.00 days                 |
| % Removal via Fugitive Release:                  | 0.00 %                     |
| Total Fugitive Release:                          | 1.82E-12 kg/yr             |
| Max Annual Average Air Concentration (Fugitive): | 5.45E-14 µg/m <sup>3</sup> |
| Max 24 Hour Average Air Concentration(Fugitive): | 4.97E-12 µg/m <sup>3</sup> |
| Per Site Stack Release:                          | NA kg/site/day             |
| Stack Release Days per Year:                     | NA days                    |
| % Removal via Stack Release:                     | 0.00 %                     |
| Total Stack Release:                             | NA kg/yr                   |
| Max Annual Average Air Concentration (Stack):    | 0.00 µg/m <sup>3</sup>     |
| Max 24 Hour Average Air Concentration (Stack):   | 0.00 µg/m <sup>3</sup>     |

| Exposure Units                  | Results (Stack) | Results (Fugitive) | ASSUMPTIONS |            |         |                   |
|---------------------------------|-----------------|--------------------|-------------|------------|---------|-------------------|
|                                 |                 |                    | ED (years)  | AT (years) | BW (kg) | Inh. Rate (m³/hr) |
| Cancer                          |                 |                    |             |            |         |                   |
| LADD <sub>pot</sub> (mg/kg/day) | 0.00            | 4.22E-18           | 33.00       | 78.00      | 80.00   | 0.61              |
| LADC <sub>pot</sub> (mg/m³)     | 0.00            | 2.31E-17           | 33.00       | 78.00      | NA      | NA                |
| Acute                           |                 |                    |             |            |         |                   |
| ADR <sub>pot</sub> (mg/kg/day)  | 0.00            | 9.10E-16           | NA          | 1 day      | 80.00   | 0.61              |

Inhalation Comments:

#### Stack Parameter Data

|                          |        |
|--------------------------|--------|
| Stack Height             | 10.00  |
| Inside Stack Diameter:   | 0.10   |
| Stack Gas Exit Velocity: | 0.10   |
| Stack Gas Temperature:   | 293.00 |

#### Fugitive Parameter Data

|                            |       |   |
|----------------------------|-------|---|
| Release Height:            | 3.00  | m |
| Length of Release Opening: | 10.00 | m |
| Width of Release Opening:  | 10.00 | m |

#### Meteorological and Terrain Information:

|                                    |        |   |
|------------------------------------|--------|---|
| Surrounding Land Use:              | Rural  |   |
| Terrain Height:                    | 0.00   | m |
| Distance to Residence of Interest: | 100.00 | m |
| Meteorological Class:              | Full   |   |
| Stability Class:                   | NA     |   |
| Wind Speed:                        | NA     |   |

#### Downwash Information:

|                  |    |   |
|------------------|----|---|
| Facility Length: | NA | m |
| Facility Width:  | NA | m |
| Facility Height: | NA | m |

# INITIAL REVIEW EXPOSURE REPORT

Chemical ID: Jeffamine DA on-site

Assessor:

## ENVIRONMENTAL RELEASES

Scenario#:2

Number of Release Sites: 1.

Release Activity: Mixing operation

| Release Description: | WATER          | LANDFILL<br>Non-sludge/Sludge | STACK           | FUGITIVE            |
|----------------------|----------------|-------------------------------|-----------------|---------------------|
| Total Releases:      | N/A<br>(kg/yr) | N/A<br>(kg/yr)                | 0.00<br>(kg/yr) | 9.30E-16<br>(kg/yr) |

## Non-sludge/Sludge

|                   |                      |                           |                       |                           |
|-------------------|----------------------|---------------------------|-----------------------|---------------------------|
| Release Days/yr:  | N/A                  | 0.00/0.00                 | 0.00                  | 50.00                     |
| Per Site Release: | N/A<br>(kg/site/day) | N/A/0.00<br>(kg/site/day) | 0.00<br>(kg/site/day) | 1.86E-17<br>(kg/site/day) |

Remarks:

# INITIAL EXPOSURE REVIEW REPORT

Chemical ID: Jeffamine DA on-site

## INHALATION EXPOSURE ESTIMATES (POST-TREATMENT)

SCENARIO #: 2 RELEASE ACTIVITY: Mixing operation

RELEASE DESCRIPTION:

METHOD OF CALCULATION: Screen3

EXPOSED POPULATION: Adult

|  |                            |
|--|----------------------------|
| Number of Sites:                                 | 1.                         |
| Per Site Fugitive Release:                       | 1.86E-17 kg/site/day       |
| Fugitive Release Days per Year:                  | 50.00 days                 |
| % Removal via Fugitive Release:                  | 0.00 %                     |
| Total Fugitive Release:                          | 9.30E-16 kg/yr             |
| Max Annual Average Air Concentration (Fugitive): | 2.79E-17 µg/m <sup>3</sup> |
| Max 24 Hour Average Air Concentration(Fugitive): | 2.54E-15 µg/m <sup>3</sup> |
| Per Site Stack Release:                          | NA kg/site/day             |
| Stack Release Days per Year:                     | NA days                    |
| % Removal via Stack Release:                     | 0.00 %                     |
| Total Stack Release:                             | NA kg/yr                   |
| Max Annual Average Air Concentration (Stack):    | 0.00 µg/m <sup>3</sup>     |
| Max 24 Hour Average Air Concentration (Stack):   | 0.00 µg/m <sup>3</sup>     |

| Exposure Units                  | Results (Stack) | Results (Fugitive) | ASSUMPTIONS |            |         |                   |
|---------------------------------|-----------------|--------------------|-------------|------------|---------|-------------------|
|                                 |                 |                    | ED (years)  | AT (years) | BW (kg) | Inh. Rate (m³/hr) |
| Cancer                          |                 |                    |             |            |         |                   |
| LADD <sub>pot</sub> (mg/kg/day) | 0.00            | 2.16E-21           | 33.00       | 78.00      | 80.00   | 0.61              |
| LADC <sub>pot</sub> (mg/m³)     | 0.00            | 1.18E-20           | 33.00       | 78.00      | NA      | NA                |
| Acute                           |                 |                    |             |            |         |                   |
| ADR <sub>pot</sub> (mg/kg/day)  | 0.00            | 4.65E-19           | NA          | 1 day      | 80.00   | 0.61              |

Inhalation Comments:

#### Stack Parameter Data

|                          |        |
|--------------------------|--------|
| Stack Height             | 10.00  |
| Inside Stack Diameter:   | 0.10   |
| Stack Gas Exit Velocity: | 0.10   |
| Stack Gas Temperature:   | 293.00 |

#### Fugitive Parameter Data

|                            |       |   |
|----------------------------|-------|---|
| Release Height:            | 3.00  | m |
| Length of Release Opening: | 10.00 | m |
| Width of Release Opening:  | 10.00 | m |

#### Meteorological and Terrain Information:

|                                    |        |   |
|------------------------------------|--------|---|
| Surrounding Land Use:              | Rural  |   |
| Terrain Height:                    | 0.00   | m |
| Distance to Residence of Interest: | 100.00 | m |
| Meteorological Class:              | Full   |   |
| Stability Class:                   | NA     |   |
| Wind Speed:                        | NA     |   |

#### Downwash Information:

|                  |    |   |
|------------------|----|---|
| Facility Length: | NA | m |
| Facility Width:  | NA | m |
| Facility Height: | NA | m |

# INITIAL REVIEW EXPOSURE REPORT

Chemical ID: Jeffamine DA on-site

Assessor:

## ENVIRONMENTAL RELEASES

Scenario#:3

Number of Release Sites: 1.

Release Activity: Sample product

| Release Description: | WATER             | LANDFILL      | STACK         | FUGITIVE      |
|----------------------|-------------------|---------------|---------------|---------------|
|                      | Non-sludge/Sludge |               |               |               |
| Total Releases:      | N/A               | N/A           | 0.00          | 9.30E-16      |
|                      | (kg/yr)           | (kg/yr)       | (kg/yr)       | (kg/yr)       |
|                      | Non-sludge/Sludge |               |               |               |
| Release Days/yr:     | N/A               | 0.00/0.00     | 0.00          | 50.00         |
| Per Site Release:    | N/A               | N/A/0.00      | 0.00          | 1.86E-17      |
|                      | (kg/site/day)     | (kg/site/day) | (kg/site/day) | (kg/site/day) |

Remarks:

# INITIAL EXPOSURE REVIEW REPORT

Chemical ID: Jeffamine DA on-site

## INHALATION EXPOSURE ESTIMATES (POST-TREATMENT)

SCENARIO #: 3 RELEASE ACTIVITY: Sample product

RELEASE DESCRIPTION:

METHOD OF CALCULATION: Screen3

EXPOSED POPULATION: Adult

|  |                            |
|--|----------------------------|
| Number of Sites:                                 | 1.                         |
| Per Site Fugitive Release:                       | 1.86E-17 kg/site/day       |
| Fugitive Release Days per Year:                  | 50.00 days                 |
| % Removal via Fugitive Release:                  | 0.00 %                     |
| Total Fugitive Release:                          | 9.30E-16 kg/yr             |
| Max Annual Average Air Concentration (Fugitive): | 2.79E-17 µg/m <sup>3</sup> |
| Max 24 Hour Average Air Concentration(Fugitive): | 2.54E-15 µg/m <sup>3</sup> |
| Per Site Stack Release:                          | NA kg/site/day             |
| Stack Release Days per Year:                     | NA days                    |
| % Removal via Stack Release:                     | 0.00 %                     |
| Total Stack Release:                             | NA kg/yr                   |
| Max Annual Average Air Concentration (Stack):    | 0.00 µg/m <sup>3</sup>     |
| Max 24 Hour Average Air Concentration (Stack):   | 0.00 µg/m <sup>3</sup>     |

| Exposure Units                  | Results (Stack) | Results (Fugitive) | ASSUMPTIONS |            |         |                   |
|---------------------------------|-----------------|--------------------|-------------|------------|---------|-------------------|
|                                 |                 |                    | ED (years)  | AT (years) | BW (kg) | Inh. Rate (m³/hr) |
| Cancer                          |                 |                    |             |            |         |                   |
| LADD <sub>pot</sub> (mg/kg/day) | 0.00            | 2.16E-21           | 33.00       | 78.00      | 80.00   | 0.61              |
| LADC <sub>pot</sub> (mg/m³)     | 0.00            | 1.18E-20           | 33.00       | 78.00      | NA      | NA                |
| Acute                           |                 |                    |             |            |         |                   |
| ADR <sub>pot</sub> (mg/kg/day)  | 0.00            | 4.65E-19           | NA          | 1 day      | 80.00   | 0.61              |

Inhalation Comments:



#### Stack Parameter Data

|                          |        |
|--------------------------|--------|
| Stack Height             | 10.00  |
| Inside Stack Diameter:   | 0.10   |
| Stack Gas Exit Velocity: | 0.10   |
| Stack Gas Temperature:   | 293.00 |

#### Fugitive Parameter Data

|                            |       |   |
|----------------------------|-------|---|
| Release Height:            | 3.00  | m |
| Length of Release Opening: | 10.00 | m |
| Width of Release Opening:  | 10.00 | m |

#### Meteorological and Terrain Information:

|                                    |        |   |
|------------------------------------|--------|---|
| Surrounding Land Use:              | Rural  |   |
| Terrain Height:                    | 0.00   | m |
| Distance to Residence of Interest: | 100.00 | m |
| Meteorological Class:              | Full   |   |
| Stability Class:                   | NA     |   |
| Wind Speed:                        | NA     |   |

#### Downwash Information:

|                  |    |   |
|------------------|----|---|
| Facility Length: | NA | m |
| Facility Width:  | NA | m |
| Facility Height: | NA | m |

# INITIAL REVIEW EXPOSURE REPORT

Chemical ID: Jeffamine DA on-site

Assessor:

## ENVIRONMENTAL RELEASES

Scenario#:4

Number of Release Sites: 1.

Release Activity: Equipment clearing

| Release Description: | WATER             | LANDFILL      | STACK         | FUGITIVE      |
|----------------------|-------------------|---------------|---------------|---------------|
|                      | Non-sludge/Sludge |               |               |               |
| Total Releases:      | N/A               | N/A           | 0.00          | 4.36E-12      |
|                      | (kg/yr)           | (kg/yr)       | (kg/yr)       | (kg/yr)       |
|                      | Non-sludge/Sludge |               |               |               |
| Release Days/yr:     | N/A               | 0.00/0.00     | 0.00          | 50.00         |
| Per Site Release:    | N/A               | N/A/0.00      | 0.00          | 8.72E-14      |
|                      | (kg/site/day)     | (kg/site/day) | (kg/site/day) | (kg/site/day) |

Remarks:

# INITIAL EXPOSURE REVIEW REPORT

Chemical ID: Jeffamine DA on-site

## INHALATION EXPOSURE ESTIMATES (POST-TREATMENT)

SCENARIO #: 4 RELEASE ACTIVITY: Equipment cleaning

RELEASE DESCRIPTION:

METHOD OF CALCULATION: Screen3

EXPOSED POPULATION: Adult

|  |                            |
|--|----------------------------|
| Number of Sites:                                 | 1.                         |
| Per Site Fugitive Release:                       | 8.72E-14 kg/site/day       |
| Fugitive Release Days per Year:                  | 50.00 days                 |
| % Removal via Fugitive Release:                  | 0.00 %                     |
| Total Fugitive Release:                          | 4.36E-12 kg/yr             |
| Max Annual Average Air Concentration (Fugitive): | 1.31E-13 µg/m <sup>3</sup> |
| Max 24 Hour Average Air Concentration(Fugitive): | 1.19E-11 µg/m <sup>3</sup> |
| Per Site Stack Release:                          | NA kg/site/day             |
| Stack Release Days per Year:                     | NA days                    |
| % Removal via Stack Release:                     | 0.00 %                     |
| Total Stack Release:                             | NA kg/yr                   |
| Max Annual Average Air Concentration (Stack):    | 0.00 µg/m <sup>3</sup>     |
| Max 24 Hour Average Air Concentration (Stack):   | 0.00 µg/m <sup>3</sup>     |

| Exposure Units                  | Results (Stack) | Results (Fugitive) | ASSUMPTIONS |            |         |                   |
|---------------------------------|-----------------|--------------------|-------------|------------|---------|-------------------|
|                                 |                 |                    | ED (years)  | AT (years) | BW (kg) | Inh. Rate (m³/hr) |
| Cancer                          |                 |                    |             |            |         |                   |
| LADD <sub>pot</sub> (mg/kg/day) | 0.00            | 1.01E-17           | 33.00       | 78.00      | 80.00   | 0.61              |
| LADC <sub>pot</sub> (mg/m³)     | 0.00            | 5.54E-17           | 33.00       | 78.00      | NA      | NA                |
| Acute                           |                 |                    |             |            |         |                   |
| ADR <sub>pot</sub> (mg/kg/day)  | 0.00            | 2.18E-15           | NA          | 1 day      | 80.00   | 0.61              |

Inhalation Comments:

#### Stack Parameter Data

|                          |        |
|--------------------------|--------|
| Stack Height             | 10.00  |
| Inside Stack Diameter:   | 0.10   |
| Stack Gas Exit Velocity: | 0.10   |
| Stack Gas Temperature:   | 293.00 |

#### Fugitive Parameter Data

|                            |       |   |
|----------------------------|-------|---|
| Release Height:            | 3.00  | m |
| Length of Release Opening: | 10.00 | m |
| Width of Release Opening:  | 10.00 | m |

#### Meteorological and Terrain Information:

|                                    |          |
|------------------------------------|----------|
| Surrounding Land Use:              | Rural    |
| Terrain Height:                    | 0.00 m   |
| Distance to Residence of Interest: | 100.00 m |
| Meteorological Class:              | Full     |
| Stability Class:                   | NA       |
| Wind Speed:                        | NA       |

#### Downwash Information:

|                  |    |   |
|------------------|----|---|
| Facility Length: | NA | m |
| Facility Width:  | NA | m |
| Facility Height: | NA | m |

# INITIAL REVIEW EXPOSURE REPORT

Chemical ID: Jeffamine DA on-site

Assessor:

## ENVIRONMENTAL RELEASES

Scenario#:5

Number of Release Sites: 1.

Release Activity: Load product into containers

| Release Description: | WATER             | LANDFILL      | STACK         | FUGITIVE      |
|----------------------|-------------------|---------------|---------------|---------------|
|                      | Non-sludge/Sludge |               |               |               |
| Total Releases:      | N/A               | N/A           | 0.00          | 1.01E-12      |
|                      | (kg/yr)           | (kg/yr)       | (kg/yr)       | (kg/yr)       |
|                      | Non-sludge/Sludge |               |               |               |
| Release Days/yr:     | N/A               | 0.00/0.00     | 0.00          | 50.00         |
| Per Site Release:    | N/A               | N/A/0.00      | 0.00          | 2.02E-14      |
|                      | (kg/site/day)     | (kg/site/day) | (kg/site/day) | (kg/site/day) |

Remarks:

# INITIAL EXPOSURE REVIEW REPORT

Chemical ID: Jeffamine DA on-site

## INHALATION EXPOSURE ESTIMATES (POST-TREATMENT)

SCENARIO #: 5

RELEASE ACTIVITY: Load product into containers

RELEASE DESCRIPTION:

METHOD OF CALCULATION: Screen3

EXPOSED POPULATION: Adult

|  |                            |
|--|----------------------------|
| Number of Sites:                                 | 1.                         |
| Per Site Fugitive Release:                       | 2.02E-14 kg/site/day       |
| Fugitive Release Days per Year:                  | 50.00 days                 |
| % Removal via Fugitive Release:                  | 0.00 %                     |
| Total Fugitive Release:                          | 1.01E-12 kg/yr             |
| Max Annual Average Air Concentration (Fugitive): | 3.02E-14 µg/m <sup>3</sup> |
| Max 24 Hour Average Air Concentration(Fugitive): | 2.76E-12 µg/m <sup>3</sup> |
| Per Site Stack Release:                          | NA kg/site/day             |
| Stack Release Days per Year:                     | NA days                    |
| % Removal via Stack Release:                     | 0.00 %                     |
| Total Stack Release:                             | NA kg/yr                   |
| Max Annual Average Air Concentration (Stack):    | 0.00 µg/m <sup>3</sup>     |
| Max 24 Hour Average Air Concentration (Stack):   | 0.00 µg/m <sup>3</sup>     |

| Exposure Units                  | Results (Stack) | Results (Fugitive) | ASSUMPTIONS |            |         |                   |
|---------------------------------|-----------------|--------------------|-------------|------------|---------|-------------------|
|                                 |                 |                    | ED (years)  | AT (years) | BW (kg) | Inh. Rate (m³/hr) |
| Cancer                          |                 |                    |             |            |         |                   |
| LADD <sub>pot</sub> (mg/kg/day) | 0.00            | 2.34E-18           | 33.00       | 78.00      | 80.00   | 0.61              |
| LADC <sub>pot</sub> (mg/m³)     | 0.00            | 1.28E-17           | 33.00       | 78.00      | NA      | NA                |
| Acute                           |                 |                    |             |            |         |                   |
| ADR <sub>pot</sub> (mg/kg/day)  | 0.00            | 5.05E-16           | NA          | 1 day      | 80.00   | 0.61              |

Inhalation Comments:

#### Stack Parameter Data

|                          |        |
|--------------------------|--------|
| Stack Height             | 10.00  |
| Inside Stack Diameter:   | 0.10   |
| Stack Gas Exit Velocity: | 0.10   |
| Stack Gas Temperature:   | 293.00 |

#### Fugitive Parameter Data

|                            |       |   |
|----------------------------|-------|---|
| Release Height:            | 3.00  | m |
| Length of Release Opening: | 10.00 | m |
| Width of Release Opening:  | 10.00 | m |

#### Meteorological and Terrain Information:

|                                    |        |   |
|------------------------------------|--------|---|
| Surrounding Land Use:              | Rural  |   |
| Terrain Height:                    | 0.00   | m |
| Distance to Residence of Interest: | 100.00 | m |
| Meteorological Class:              | Full   |   |
| Stability Class:                   | NA     |   |
| Wind Speed:                        | NA     |   |

#### Downwash Information:

|                  |    |   |
|------------------|----|---|
| Facility Length: | NA | m |
| Facility Width:  | NA | m |
| Facility Height: | NA | m |